REMARKS

Applicants submit herewith claims 21-44 which distinguish over the art of record in various ways.

For example, claim 21 is directed to an apparatus for enabling a tape to be driven from an initial position associated with an initial record number and initial file mark to a desired location associated with a desired record number and desired file mark in response to a request for retrieval of the data at the desired record number and desired file mark. The tape has parallel tracks and the apparatus comprises a storage device external to the tape for storing (a) record numbers and file marks and (b) data set numbers on the tape and numbers of tracks on the tape. The stored record numbers and file marks correspond with the stored data set numbers and track numbers. A processor arrangement is arranged to be responsive to (a), (b) and (c) the desired record number and the desired file mark for determining the location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark.

Claim 22 depends on claim 21 and includes the additional requirement of the tape including partitioned logical data distributed along the length of the tape and data partition information. The apparatus is in combination with a drive for the tape and a head for reading the tape. The drive is arranged to be responsive to the determined data set number and the determined track number and the data position information on the tape for positioning the head at the determined data set number and the determined track number.

Claim 23 depends on claim 22 and requires the tracks to include beginning of wrap and end of wrap regions. The processing arrangement and the drive of claim 22 are arranged for causing the head to move from the initial position on one of the tracks to the desired location on another of the tracks without crossing the beginning of wrap or end of wrap regions.

Claim 24 depends on claim 21 and the processor arrangement is arranged for determining the location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark by (i) determining the current physical position of the head relative to the tracks in response to (a) and (b) of claim 21, (ii) estimating the location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark based on current position parameters, and (iii) iteratively changing the estimated location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark until the correct location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark is found.

Claim 25 depends on claim 24 and requires the processor arrangement to be arranged to perform (iii) by (1) determining if the determined location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark is greater or less than an indication of the current position of the head relative to the tracks, (2) changing the indication of the current position by +N and -N in response to the desired location being respectively greater and less than the current position, where N is a predetermined number of data sets, (3) reading the record numbers and file mark numbers and data set numbers and track

numbers for the location associated with the indication of the current position ±N, (4) making a new estimate based on (3), and (5) repeating (1), (2), (3) and (4) until the correct target position is found.

Independent claim 26 is directed to an apparatus for enabling a tape to be driven from an initial position associated with an initial record number and initial file mark to a desired location associated with a desired record number and desired file mark in response to a request for retrieval of the data at the desired record number and desired file mark, the tape having parallel tracks. The apparatus comprises a storage device for storing (a) record numbers and file marks and (b) data set numbers on the tape and numbers of tracks on the tape, the stored record numbers and file marks corresponding with the stored data set numbers and track numbers. The apparatus also includes a processor arrangement arranged to be responsive to (a), (b) and (c) the desired record number and the desired file mark for determining the location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark. The processor arrangement is arranged for determining the location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark by (i) determining the current physical position of the head relative to the tracks in response to (a) and (b), (ii) estimating the location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark based on current position parameters, and (iii) iteratively changing the estimated location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark until the correct location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark is found.

Claims 27 and 28 depend on claim 26, but are otherwise the same as claims 25 and 22, respectively.

Independent claim 29 defines an apparatus for enabling a tape to be driven from an initial position associated with an initial record number and initial file mark to a desired location associated with a desired record number and desired file mark in response to a request for retrieval of the data at the desired record number and desired file mark, the tape having parallel tracks. The apparatus comprises a storage device for storing (a) record numbers and file marks and (b) data set numbers on the tape and numbers of tracks on the tape. The stored record numbers and file marks correspond with the stored data set numbers and track numbers. A processor arrangement is arranged to be responsive to (a), (b) and (c) the desired record number and the desired file mark for determining the location on the tape of the data set number and track number corresponding with the desired record number and the desired file mark. The tracks include beginning of wrap and end of wrap regions. The processor arrangement and a drive are arranged for causing the head to move from the initial physical position on one of the tracks to the desired location on another of the tracks without crossing the beginning of wrap or end of wrap regions.

Claims 30-32 depend on claim 29, either directly or indirectly, but otherwise are the same as claims 22, 24 and 25.

Claims 33-44 are similar to claims 21-27, except that claims 33-44 are in method format and do not require a processor.

One further point, applicants note that the anticipation rejection of claim 12, based on Shaath et al. was incorrect because Shaath et al. does not disclose a cartridge.

Entry of the foregoing Amendment and allowance of the application for the reasons set forth herein and in the original response are in order.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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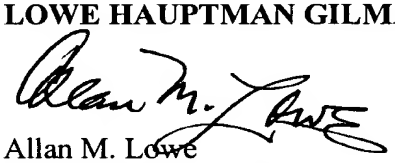

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